



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2019-0249; Product Identifier 2019-NM-010-AD; Amendment 39-19693; AD 2019-14-15]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** The FAA is superseding Airworthiness Directive (AD) 2017-25-12, which applied to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. AD 2017-25-12 required repetitive inspections for cracking of the webs of the stub beams at certain fuselage stations (STAs), and applicable on-condition actions. This AD also requires repetitive inspections to include certain other fuselage stations for cracking of the stub beams, repetitive inspections for existing repairs at certain locations, and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0249.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0249; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the regulatory evaluation, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Peter Jarzomb, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5234; fax: 562-627-5210; email: [Peter.Jarzomb@faa.gov](mailto:Peter.Jarzomb@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2017-25-12, Amendment 39-19126 (82 FR 59967, December 18, 2017) (“AD 2017-25-12”). AD 2017-25-12 applied to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. The NPRM published in the Federal Register on April 22, 2019 (84 FR 16628). The NPRM was prompted by reports of cracking in the webs of the stub beams at certain fuselage STAs, and cracking of the stub beam at fuselage STA 685 at the inboard end of the upper chord and the outboard end of the lower chord. The NPRM proposed to continue to require the existing repetitive inspections at certain fuselage stations for cracking of the stub beams, and applicable on-condition actions, and to also require repetitive inspections at fuselage STA 685. The FAA is issuing this AD to address cracking of the stub beams, which, if not corrected, could result in the loss of structural integrity of the airframe during flight, collapse of the main landing gear, and failure of the pressure deck.

### **Comments**

The FAA gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA’s response to each comment.

## **Support for the NPRM**

Boeing concurred with the content of the NPRM. Nathan Levin and Christopher D. George expressed support for the NPRM.

## **Effect of Winglets on Accomplishment of the Proposed Actions**

Aviation Partners Boeing stated that accomplishing Supplemental Type Certificate (STC) ST01219SE does not affect compliance with the proposed actions.

The FAA concurs with the commenter. Paragraph (c) of the proposed AD has been redesignated as paragraph (c)(1) of this AD, and paragraph (c)(2) has been added to this AD to state that installation of STC ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirement of 14 CFR 39.17.

## **Request to Improve the Effectiveness of Required Inspections**

Christopher D. George stated that the inspections for fuselage cracking specified in the proposed AD might avert a potential inflight catastrophe, but they fall short of identifying the root issue behind potentially flawed designs and/or inadequate building materials. The commenter shared additional concerns regarding the extent and requirements of the new fuselage inspection criteria.

The FAA infers that the commenter is requesting that the inspection requirements specified in the proposed AD be revised so the inspection reports provide extensive information regarding the root cause of the unsafe condition. The FAA disagrees with the commenter’s request. The change requested by the commenter to include inspections that

identify the root issue behind potentially flawed designs and/or inadequate building materials is outside the scope of this AD. The purpose of this AD is to address the identified unsafe condition. The FAA has determined that the inspections required by this AD adequately address the unsafe condition: cracking in the webs of the stub beams at certain fuselage stations, and cracking of the stub beam at fuselage STA 685 at the inboard end of the upper chord and the outboard end of the lower chord.

As a component of our safety management system, we verify that the safety systems of the design approval holder meet applicable requirements. Working with approval holders during the design development process, we strive to avoid unsafe conditions in the first place. We are continuously evaluating our certification system and procedures and improving them when problems are found. In addition, if the FAA is made aware of issues occurring on a certificated product, we conduct an investigation, evaluate the manufacturer's root-cause analysis, and make a determination whether or not an unsafe condition exists. We then take appropriate action to mitigate the unsafe condition. The AD has not been revised in regard to this issue.

## **Conclusion**

The FAA reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously, and minor editorial changes. The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and

- Do not add any additional burden upon the public than was already proposed in the NPRM.

The FAA has also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

#### **Related Service Information Under 1 CFR part 51**

The FAA has reviewed Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018. The service information describes procedures for inspections at certain fuselage stations for cracking of the stub beams (which includes the web, upper chord, and lower chord), repetitive general visual inspections for any existing repair in the STA 685 and STA 706 stub beam webs, and applicable on-condition actions. The inspections for cracking include high frequency eddy current (HFEC) and detailed inspections for cracking of the fuselage stub beam below the passenger floor at STA 685, STA 695, and STA 706, and HFEC inspections for cracking in repaired areas. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

#### **Costs of Compliance**

The FAA estimates that this AD affects 171 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

### Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	Up to 13 work-hours X \$85 per hour = Up to \$1,105 per inspection cycle	\$0	Up to \$1,105 per inspection cycle	Up to \$188,955 per inspection cycle

The FAA has received no definitive data that would enable the agency to provide cost estimates for the on-condition actions specified in this AD.

#### Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has

delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

### **Regulatory Findings**

The FAA has determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

- 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.



### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2017-25-12, Amendment 39-19126 (82 FR 59967, December 18, 2017), and adding the following new AD:

**2019-14-15 The Boeing Company:** Amendment 39-19693; Docket No. FAA-2019-0249; Product Identifier 2019-NM-010-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces 2017-25-12, Amendment 39-19126 (82 FR 59967, December 18, 2017) (“AD 2017-25-12”).

#### **(c) Applicability**

(1) This AD applies to all The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a “change in product” alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by reports of cracking in the webs of the stub beams at certain fuselage stations (STAs), and cracking of the stub beam at fuselage STA 685 at the inboard end of the upper chord and the outboard end of the lower chord. The FAA is issuing this AD to address such cracking, which, if not corrected, could result in the loss of structural integrity of the airframe during flight, collapse of the main landing gear, and failure of the pressure deck.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Required Actions for Group 1 Airplanes**

For airplanes identified as Group 1 in Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018: Within 120 days after the effective date of this AD, inspect the stub beams and stub beam webs for any cracking or existing repairs, and do all applicable on-condition actions, using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

**(h) Required Actions for Groups 2 Through 6 Airplanes**

Except as specified by paragraph (i) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018.

**(i) Exceptions to Service Information Specifications**

(1) For purposes of determining compliance with the requirements of this AD: Where Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018, uses the phrase “the revision 1 issue date of this service bulletin,” this AD requires using “the effective date of this AD,” except where Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018, uses the phrase “the original issue date of this service bulletin” in a note or flag note.

(2) Where Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018, specifies contacting Boeing for repair instructions: This AD requires doing the repair before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in

paragraph (k) of this AD. Information may be emailed to:

9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) Except as specified by paragraph (i) of this AD: For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(k) Related Information**

For more information about this AD, contact Peter Jarzomb, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5234; fax: 562-627-5210; email: Peter.Jarzomb@faa.gov.

**(l) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 737-53A1364, Revision 1, dated October 25, 2018.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110 SK57, Seal Beach, CA 90740 5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:  
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Des Moines, Washington, on July 26, 2019.

Dionne Palermo,  
Acting Director,  
System Oversight Division,  
Aircraft Certification Service.  
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